Public Notice

US Army Corps of Engineers

Sacramento District
1325 J Street
Sacramento, CA 95814-2922

Number: 200575151
Date: April 28, 2005
Comments Due: May 27, 2005

SUBJECT: The U.S. Army Corps of Engineers, Sacramento District, (Corps) is evaluating a permit application to enlarge the reservoir storage capacity of Black Lake No. 1. The proposed project activities would result in impacts to approximately 0.755 acre of waters of the United States, including wetlands, at Black Lake No. 1 near Vail, Colorado. This notice is to inform interested parties of the proposed activity and to solicit comments. This notice may also be viewed at the Corps web site at http://www.spk.usace.army.mil/regulatory.html.

AUTHORITY: This application is being evaluated under Section 404 of the Clean Water Act for the discharge of dredged or fill material in waters of the United States.

APPLICANT: Eagle River Water & Sanitation District
Mr. Dennis Gelvin, General Manager
846 Forest Road
Vail, Colorado 81657
970-476-7480

AGENT: Hydrosphere Resource Consultants
Mr. Robert Weaver
1002 Walnut, Suite 200
Boulder, Colorado 80302
303-443-7839

LOCATION: The project site is located at Black Gore Creek near Vail Pass along Interstate Highway 70 within Section 9, Township 6 South, Range 79 West, Eagle County, Colorado, and can be seen on the Vail Pass USGS Topographic Quadrangle.

PROJECT DESCRIPTION: The first enlargement of Black Lake No. 1 was completed in 1992 by the Eagle River Water & Sanitation District (the "District", formerly the Vail Valley Consolidated Water District) by the construction of an earth dam authorized under Department of the Army permit number 190109560 issued on May 18, 1988.

This permit authorized the total current reservoir capacity of 362-acre-feet (AF) of water, 227 AF of which is allocated to the District for augmentation of instream flows in Gore Creek and other Eagle River uses.

The proposed second enlargement of Black Lake No. 1 would involve modifications to the dam spillway to raise the reservoir surface elevation by approximately 4 feet and increase the capacity of the spillway, as shown on Reservoir Site Plan, Figure A-2. In addition, the operating plan for the reservoir would be modified to allow use of about 18 AF of storage below the currently established minimum pool. The proposed project would increase the active storage capacity of Black Lake No. 1 as identified in Table 1 below.

The proposed project would include the following:

1. The dam spillway would be enlarged from a 20-foot bottom width to a 40-foot bottom width (see Figures A-3 and A-4);

2. A 4-foot high weir would be installed in the widened section of the spillway to raise the surface elevation of the reservoir to 10,494.5 (see Figures A-3 and A-4);

3. The dam crest would be raised by about 2 feet to an elevation of 10,502.5 feet, using material removed from the spillway enlargement;

4. The wheel house for control of the outlet valve, the handicap accessible fishing pier and path, piezometers and other appurtenances would be modified as necessary to accommodate the increases in water surface and dam crest elevations; and

5. A new operating plan for the reservoir would be implemented to make storage water available to the District for augmentation of instream flows and other water supply needs.

6. A total of 26.4 cubic yards of concrete would be discharged below the normal high water elevation at the spillway floor.

The applicant is proposing to excavate approximately 2,400 cubic yards of rock and earthen material to enlarge the spillway, with approximately 600 cubic yards of this material used to raise the dam embankment and the remaining material used for dam and spillway maintenance at Black Lake No. 2, or removed from the site. During construction, the Lake Level would be reduced by approximately 3 feet below normal high water level elevation with the Lake to refill during the following spring runoff.

During construction, a 24-inch corrugated steel culvert and up to 31 cubic yards of rock and coarse sandy soil will be placed in Black Gore Creek at the lower end of the spillway. This temporary placement of fill is necessary to bridge the stream for access to the spillway for construction equipment. Placement of the culvert and fill material will temporarily impact up to 25 feet of the stream channel at the mouth of the existing spillway. After construction, the culvert and fill material will be removed and the stream channel restored to pre-construction conditions. Table 1 below quantifies proposed changes to the existing reservoir:

Table 1: Proposed Changes to Dam and Reservoir Characteristics

Parameter	Existing	Change	Proposed
Max. water surface area	25.7 acres	+1.7	27.4 acres
Max. dam spillway elev.	10,490.5 ft.	+4 ft.	10,494.5 ft.
Embankment crest elev.	10,500.5 ft.	+2 ft.	10,502.5 ft.
Max. outlet discharge	22.3 cfs[1]	+2.7 cfs	25.0 cfs
Max. storage capacity	362 AF	+107 AF	469 AF
Min. storage capacity	135 AF	-18 AF	117 AF
Active capacity	227 AF	+125 AF	352 AF

(cfs[1] = cubic feet/second)

In addition to the construction activities identified above, reservoir operation changes would be modified to accommodate year-round water demand changes. These include the protection and enhancement of instream flows for fisheries, scenic values, boating and water quality and other recreational and economic components. Water uses within Eagle County have changed from historic agriculture and mining diversions during the summer growing seasons to new summer uses for lawn and golf course irrigation

practices and winter season uses to support recreation, tourism and increased domestic uses associated with the ski industry.

Based on the available information, the overall project purpose is to meet additional water demands for domestic and snowmaking purposes and augment water diversions when streamflows in Gore Creek (between the Black Gore Creek and Red Sandstone Creek tributaries) are at or below the Colorado Water Conservation Board (CWCB) instream flow water right level requirements (16 cfs-May 1 through September 30, 10 cfs-October 1 through October 31 and 6 cfs-November 1 through April 30).

The applicant believes there is a need for this enlargement as the current reservoir operation plan can not meet critical augmentation requirements. Fishery and hydrology studies conducted prior to the first enlargement of Black Lake No. 1 found that the critical factor for trout populations in Gore Creek was limited adult habitat, due to low flows during the mid-winter months of January and February. The District and the Colorado Department of Natural Resources developed an operating plan under which all 300 AF of available storage in Black Lakes Nos. 1 and 2 was to be used to augment streamflows in Gore Creek during the winter months of December through March.

Furthermore, the applicant states that during the critical low-streamflow winter months, water use in Eagle County is limited by the senior water rights for the Shoshone Power Plant located on the Colorado River in Glenwood Canyon. When the flow in the Colorado River is not sufficient to fulfill the Shoshone water rights, the power plant places a "call" on the river which results in the curtailment of water right withdrawals that are junior to January 7, 1902. When this call is made, junior water rights on the Colorado River and its tributaries above the Dotsero must curtail their diversions unless they have a source of "augmentation" water that can be released to meet the call.

During the fall and winter months, most of the water rights for snowmaking and domestic uses in Eagle County are junior to the Shoshone call and require augmentation. The primary source of augmentation for water users in Eagle County and other headwater counties is Green Mountain Reservoir, located on the Blue River in Summit County. Water stored in Green Mountain Reservoir during spring runoff can be released during summer, fall and winter low-flow periods to cover the Shoshone call, allowing junior water users to continue diverting.

In order to meet water demands for domestic and snowmaking purposes, the District has a contract with the U.S. Bureau of Reclamation for a total of 934 AF of Green Mountain Reservoir augmentation water for diversions from Gore Creek (Green Mountain Water Service Contract No. 9-07-60-W0408). However, during dry periods and through the winter months, the use of water from Green Mountain Reservoir for augmentation of diversions from Gore Creek conflicts with instream flow water rights of the CWCB for protection of the Gore Creek fishery. To resolve this conflict, an agreement was reached with between the District, the Colorado Division of Wildlife and the CWCB to provide 300 AF of storage at Black Lakes for augmentation of wintertime streamflows in Gore Creek.

The applicant also states that under the current operational regime, the Black Lakes Nos. 1 and 2 (Black Lake No. 2 is immediately downstream of Black Lake No. 1) fill during May and June and water is released from December through March, as illustrated in Figure A-5 showing reservoir inflows, diversions to storage, and reservoir releases for the years 2000 through 2002. The three year period shown in Figure A-5 is representative of a relatively dry period. In most years, with the exception of very dry years like 2002, the reservoirs fill on the rising limb of the hydrograph, before peak runoff occurs, typically in late May or early June. When the streamflow in Gore Creek at the Vail Gage (above Red Sandstone Creek) is 10 cfs or less on or after December 1, water is released from Black Lakes under the schedule shown in Table 2 below:

Table 2: Black Lakes Release Schedule

Month	Release (cfs)	Release (AF)
December	1.01	62.1
January	1.82	111.9
February	1.55	86.6
March 1-15	1.33	39.4
Total		**300.0**

If streamflows in Gore Creek are greater than 10 cfs through December, then releases are delayed until January 1. The release rate is then prorated (through March 15 if releases begin before January 1 or through March 31 if releases begin on January 1) so as to use the full 300 AF of available storage.

Figure A-6 illustrates the impact of current Black Lakes operations during year 2000 through 2003 on streamflows on Gore Creek below the District's wells and below the diversion for the Vail Golf Course (about 12 miles downstream from Black Lake No. 2). At this location, diversion to storage during the spring are barely visible on the hydrograph because of the large amounts of tributary inflows below Black Lakes during spring runoff. Reservoir released during the winters of 2001 and 2002 were not sufficient to maintain the 6 cfs instream flow requirement. Under the current operating agreement, no water was available for release during late September of 2001 and August and September of 2002 when flows dropped well below the CWCB 16 cfs instream flow requirement.

The District states it is not required to curtail its use of water rights for diversions that are senior to the CWCB instream flow. However, the instream flow shortages shown in Figure A-6 illustrate the District's need for additional in-basin storage and for more operational flexibility to allow storage releases when needed for both augmentation and instream flow purposes. Whenever the District can use in-basin sources of augmentation (i.e., Black Lakes) for water rights that are junior to Shoshone, instead of Green Mountain Reservoir, it will be beneficial to the instream flows in Gore Creek.

The applicant also states that because the 300 AF of storage currently available in Black Lake No. 1 is not sufficient to fully meet the District's augmentation needs, the District has continued to plan and develop other water supply system improvements to reduce the impacts of municipal and snowmaking water diversions on Gore Creek.

The attached drawings, A-1 to A-8 and B-1 to B-3 provide additional project details.

ADDITIONAL INFORMATION:

In 1995, the District completed construction of an interconnecting water main between the Vail water supply system and the Upper Eagle Regional Water Authority system. This connection allows the District to divert water from the Eagle River below Gore Creek, reducing the demand for pumping from the alluvial well field located at the upper end of the Vail Golf Course by 1.5 cfs. The water that historically would have been diverted at the well field thus remains within Gore Creek and the Eagle River downstream to the intakes for the Avon Water Treatment Plant.

In 1997, the Vail Mountain Ski Area completed construction of the Dowds Junction snowmaking intake facility at the confluence of Gore Creek and the Eagle River. This allows the ski area to effectively use in-basin sources of augmentation water available from Eagle Park and Homestake Reservoirs. The District and Vail Resorts have entered into an agreement that allows the District to use the Dowds Junction intake for diversion of domestic water supply. A new water plant is scheduled for construction in 2008 that will treat water from this source. This will further reduce the demand for pumping from the

will field during periods when the Dowds Junction intake is not needed for snowmaking. It will also allow the District to directly utilize in-basin augmentation from Eagle Park and Homestake Reservoirs in-lieu of Green Mountain Reservoir.

The District proposes to use the 125 AF of additional storage at Black Lake No. 1 to provide supplemental water for the Vail Golf Course and for augmentation of water rights and instream flow purposes to modify the existing operating plan for the reservoir, and allow more flexible use of Black Lakes in a manner that would coordinate releases from storage with operations of the interconnecting water main and the future treatment plant for Dowds Junction intake water.

The streamflow impacts of the proposed project are illustrated in Figures A-7 and A-8. In most years, Black Lakes will continue to fill during early spring runoff, usually well before the end of March on the rising limb of the hydrograph (Figure A-7). Releases from storage in late summer and fall would be more than sufficient to replace diversions for irrigation a the Vail Golf Course and maintain CWCB instream flow levels, except in extremely dry years such as 2002 (Figure A-8). Allowing greater flexibility for coordination of reservoir releases with operations of the interconnecting water main will enhance instream flow conditions, particularly in February and early March of most years.

The Corps requested additional information from the applicant in correspondence dated April 5, 2005. Our request consisted of the full disclosure of all projects the applicant plans to undertake which are reasonably related to the Black Lake No. 1 project. In an effort to afford other federal, state and local agencies and the concerned public an opportunity to fully evaluate all aspects of projects reasonably related to Black Lake No. 1, the following summarizes the applicant's response to our inquiry:

1) The applicant (ERWSD) has a 16% ownership interest in the Eagle Park Reservoir. The owner of this reservoir, Eagle Park Reservoir Company (EPRC) has separate water rights and reservoir operations from those identified at Black Lake No.1. The EPRC will be requesting a Department of the Army permit for a proposed project, the Eagle Park Reservoir-East Fork Pumpback Project, at a future date. The ERWSD states that the purpose and need for the Pumpback Project is in no way related or dependent upon the proposed enlargement of Black Lake No.1. The applicant also states that any Corps' permit approval or denial for Black Lake will not affect the operation of Eagle Park Reservoir or the need for the proposed Pumpback Project.

2) The applicant has a 25% ownership interest in the Homestake Reservoir. The applicant states that ERWSD's need for and use of Homestake Reservoir water is in no way related to or dependent upon the proposed enlargement of Black Lake No.1.

3) The applicant may need to modify an existing Department of the Army permit, for the Dowds Junction Snowmaking Intake located at the confluence of Gore Creek and the Eagle River, tracked under number 199575069. The modification may be required as future uses of diverted water at this facility would be for domestic water and not entirely for snowmaking uses, as originally considered and authorized by the Corps. The applicant states that ERWSD's need for and future possible use of the Dowds Junction Intake for domestic water supply is not related to or dependent upon the proposed enlargement of Black Lake No.1.

4) The applicant is considering an additional project identified as the Vail Drinking Water Facility. This facility is needed by the ERWSD to treat water that would be diverted at the Dowds Junction Intake for domestic water supply (identified in #3 above) and is scheduled for construction in 2008. The purpose and need for this facility is driven by water quality issues (dissolved copper concentrations) at the Vail Wastewater Treatment Plant and streamflow enhancement objectives. The applicant states the functional utility of the proposed Vail Drinking Water Facility is independent of the proposed enlargement of Black Lake No.1. and would not involve any discharge of dredge or fill material or impacts to wetlands. However, in conjunction with the Dowds Junction Intake facility (#3 above), a DA permit modification for 199575069 may be required.

The applicant states that it is important to note that the use of in-basin augmentation sources (i.e., Eagle Park, Homestake, and Black Lakes) in lieu of Green Mountain Reservoir, does not result in any increase in the water demands and depletions associated with previously approved diversion facilities. The operations of these previously approved and developed facilities are driven by municipal, industrial and irrigation water demands that are independent of the available sources of water used for water rights augmentation and streamflow enhancement purposes. Please reference Figure WSS (schematic diagram) to aid in your understanding of the applicant's water supply system as it relates to the Corps permit consideration of Black Lake No.1.

Environmental Setting. Black Lake No. 1 is the upper of two in-line reservoirs built on Black Gore Creek near the Eagle/Summit county lines along Interstate 70. The roughly oval-shaped lake lies in a north-south orientation between native mountain slopes on the south side and road fill from old U.S. Highway 6 on the north. The old highway now serves as a portion of the Vail Pass bikeway and provides access to the lakes for camping, fishing, and picnicking. The inlet to Black Lake No. 1 is a small mountain stream that has been formed into a series of stair-steps by beaver dams.

The stream and adjacent lands are dominated by clumps of low- to mid-height gray-leaf willow, Booth willow, and planeleaf willow interspersed within an herbaceous community of wetland and moist-meadow graminoids and forbs. This willow-wetland-moist meadow mosaic extends along the western lakeshore, grading uphill to drier meadow communities, punctuated by small island-like patches of subalpine forest.

A fen, an important aquatic resource, is located within this vegetation mosaic at the toe of a steep slope approximately 30 meters down to the lakeshore. Several steep areas grade into cliffs in the northern portions of the Lake's western shoreline. These steep areas are dominated by upland native grasses and forbs and with conifers approaching more closely to the shoreline. The eastern lake shoreline is mostly steep and dry, consisting primarily of road fill for the old highway, with scattered small clusters of willows and scrubby cinquefoil.

Species composition of the willow-wetland-moist-meadow community mosaic at the inlet and wetter portions of the western shoreline is highly variable due to micro-scale differences in soil and slope. Prevalent species included the following:

Graminoids-water sedge, short-beaked sedge, small-winged sedge, Baltic rush, toad rush, long-styled rush, spike rush, woodrush, scouring-rush, tufted hairgrass, blue-joint reedgrass, alpine timothy, mat muhly, spike muhly, and nodding brome.

Forbs-western aster, blue aster, tall fleabane, showy daisy, subalpine daisy, leafy arnica, rayless arnica, Bigelow ligularia, fireweed, northern willow-herb, fringed gentian, little gentian, star gentian, king's crown, monks-hood, tall larkspur, bigleaf avens, variable-leaf cinquefoil, marsh marigold, rose crown, cowbane, elephantella, yellow paintbrush, hemlock parsley, and cornhusk lily. Bittercress was common along flowing rivulets.

Shrubs-willows (planeleaf, gray-leaf, and Booth's), shrubby cinquefoil, and bog birch.

The fen contains many of the species listed above, particularly water sedge, spike rush, marsh marigold, and tufted hairgrass as well as elephantella, bog saxifrage, serrate-leaf senecio, hemlock parsley, marsh felwort, and arrow-grass.

The stream reach below the dam is dominated by willows and contains a less robust herbaceous community as compared to the inlet and shoreline areas described above. No additional species were found below the dam. Drier areas higher on hillslopes were characterized by a gradual depletion of most of the species above and dominance by species such as shrubby cinquefoil, hairy golden-aster, wild

strawberry, soft cinquefoil, woolly cinquefoil, pussytoes, blueberry, silver lupine, wild geranium, common yarrow, edible valerian, indian paintbrush, and Drummond rock cress.

Alternatives. The applicant has provided information concerning project alternatives. These include the construction of other reservoir sites within the Gore Creek watershed (i.e., Polk Creek Reservoirs and Indian Creek Reservoir), Black Lake No. 1 reservoir expansion by excavation to increase storage capacity, alluvial groundwater pumping and recharge, wastewater effluent reuse and water conservation alternatives. Additional information concerning project alternatives are available from the applicant or their agent.

Mitigation. The Corps requires that applicants consider and use all reasonable and practical measures to avoid and minimize impacts to aquatic resources. If the applicant is unable to avoid or minimize all impacts, the Corps may require compensatory mitigation. The applicant, after preliminary discussions with the Corps and their own analysis of feasible, onsite wetland mitigation areas, has proposed to mitigate the wetland impacts as presented in the following Table 3:

Table 3: Wetland Impacts and Mitigation Goals

Wetland Types	Impact Area (ac^1)	Mitigation Goals(ac)
Fen	0.098	0.147 (ratio 1.5:1)
Willow Car	0.061	0.092 (ratio 1.5:1)
Willow Scrub	0.596	0.596 (ratio 1:1)
Totals	**0.755**	**0.835**

(ac^1 = acre)

Figure B-3 illustrates a total of 0.88 acres of potential on-site wetland mitigation consisting of three wetland creation areas: 1) located below the dam, 2) along the enlarged reservoir shoreline, and 3) a bench area at the upper end of the reservoir.

Plant and soil material from the transplant/donor area would be used to help establish wetland vegetation in these creation areas. This available mitigation area meets the goals stated in Table 3 above, and allows for a contingency area of 0.045 acre.

In addition, the volunteer road leading from the frontage road to the shoreline at the upper end of the reservoir would be closed of to vehicular access and reclaimed. The predominate type of vegetation (historically) impacted by this road is non-jurisdictional willow scrub covering about 0.236 acre, but the habitat related functional values associated with this area are very similar to the jurisdictional wetlands found around Black Lakes. Once restored, this area will provide a densely vegetated buffer that would filter upslope runoff prior to its discharge into the reservoir. If this area were to be included in the conceptual mitigation plan goals, the total wetland mitigation provided would equal 1.116 acre. If included, the effective mitigation ratio for each wetland type would be increased as illustrated in Table 4 below:

Table 4: Wetland Mitigation Goals with Road Closure

Wetland Types	Mitigation Goals (ac)
Fen	0.196 (ratio 2:1)
Willow Carr	0.122 (ratio 2:1)
Willow Scrub	0.775 (ratio 1.3:1)
Totals	**1.093**

Additional information regarding the applicant's conceptual mitigation proposal is still under consideration by the Corps until such time a final plan is approved and evaluated prior to any permit decision.

OTHER GOVERNMENTAL AUTHORIZATIONS: Water quality certification or a waiver, as required under Section 401 of the Clean Water Act from the Colorado Department of Public Health and Environment is required for this project. The applicant has not indicated they have applied for certification. The State Engineers Office, Technical Specifications permit for the applicant's proposed project was approved on September 23, 2004. The Corps has no information regarding Eagle County's 1041 Permit review or approval process at the date of this Public Notice. The U.S. Forest Service's (Service) Special Use Permit, amendment request, submitted by the applicant in May 2004 is not yet approved. The Service has determined that a Supplemental Environmental Assessment process will be required to determine if the proposed action should be approved under a Finding of No Significant Impact (FONSI) or if an Environmental Impact Statement (EIS) is needed to address potentially significant impacts.

National Environmental Policy Act (NEPA) compliance requirements for the proposed project will be directed by the Service (lead federal agency) with consultation and coordination with the Corps and other interested federal, state and local agencies, if necessary.

HISTORIC PROPERTIES: The lead federal agency is responsible for evaluating historic properties and cultural resources relative to this project's potential effects.

ENDANGERED SPECIES: The lead federal agency is responsible for evaluating any Federally-listed threatened or endangered species or their critical habitats protected by the Endangered Species Act relative to this project's potential effects.

The above mentioned NEPA compliance requirements are based on information provided by the applicant, our preliminary review and the lead federal agency's determinations. These NEPA related issues have not yet been evaluated by the Corps, under its permit authority.

EVALUATION FACTORS: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the described activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the described activity, must be balanced against its reasonably foreseeable detriments.

All factors which may be relevant to the described activity will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people. The activity's impact on the public interest will include

application of the Section 404(b)(1) guidelines promulgated by the Administrator, Environmental Protection Agency (40 CFR Part 230).

The Corps is soliciting comments from the public, Federal, State, and local agencies and officials, Indian tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal.

To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

SUBMITTING COMMENTS: Written comments, referencing Public Notice 200575151, must be submitted to the office listed below on or before May 27, 2005:

Mr. Mark Gilfillan, Project Manager
US Army Corps of Engineers, Sacramento District
Colorado/Gunnison Basin Regulatory Office
400 Rood Avenue, Room 142
Grand Junction, Colorado 81501-2563
Email: Mark.A.Gilfillan@usace.army.mil

The Corps is particularly interested in receiving comments related to the proposal's probable impacts on the affected aquatic environment and the secondary and cumulative effects. Anyone may request, in writing, that a public hearing be held to consider this application. Requests shall specifically state, with particularity, the reason(s) for holding a public hearing. If the Corps determines that the information received in response to this notice is inadequate for thorough evaluation, a public hearing may be warranted.

If a public hearing is warranted, interested parties will be notified of the time, date, and location. Please note that all comment letters received are subject to release to the public through the Freedom of Information Act. If you have questions or need additional information please contact the applicant or the Corps' project manager Mr. Gilfillan, at 970-243-1199, extension 15, Mark.A.Gilfillan@usace.army.mil.

Attachments: 12 drawings